What is claimed is:

1. An enzyme reaction method which comprises performing an enzyme reaction, using an immobilized enzyme having a water content of 10 % by weight or more as an enzyme and using an organic solvent substantially immiscible with water as a reaction solvent, under such conditions that a liquid phase forms a homogeneous system without phase separation although it is saturated with water or an aqueous buffer.

2. A method according to claim 1, wherein an enzyme comprising immobilized hydroxynitrile lyase which catalyzes the synthesis of a cyanohydrin from hydrogen cyanide and a carbonyl compound is used as the immobilized enzyme to convert the carbonyl compound into the corresponding optically active cyanohydrin.

3. A method according to claim 1, wherein a carrier capable of retaining water is used as a carrier for the immobilized enzyme.

4. A method according to claim 1, wherein the reaction is carried out under such conditions that a liquid phase contains water in a saturation amount in order to prevent the release of water from the immobilized enzyme into the liquid phase during the reaction.

5. A method for performing an enzyme reaction using an aldehyde compound as a substrate, which comprises removing a carboxylic acid compound contained in an aldehyde compound by subjecting the aldehyde compound to an alkaline treatment before starting the enzyme reaction.

6. A method for performing an enzyme reaction using an aldehyde compound as a substrate, which comprises reducing a carboxylic acid compound content in the

aldehyde compound to 0.1 wt % or less by subjecting the aldehyde compound to an alkaline treatment before starting the enzyme reaction.

7. A method according to claim 5, wherein the alkaline treatment comprises mixing the aldehyde compound with an alkaline aqueous solution and then separating the aldehyde compound from the aqueous phase.

8. A method according to claim 6, wherein the alkaline treatment comprises mixing the aldehyde compound with an alkaline aqueous solution and then separating the aldehyde compound from the aqueous phase.

9. A method according to claim 5, wherein the enzyme reaction is the synthesis of an optically active cyanohydrin from the aldehyde compound and hydrogen cyanide in the presence of hydroxynitrile lyase as a catalyst.

10. A method according to claim 6, wherein the enzyme reaction is the synthesis of an optically active cyanohydrin from the aldehyde compound and hydrogen cyanide in the presence of hydroxynitrile lyase as a catalyst.

11. A method for enzymatically producing an optically active cyanohydrin from a carbonyl compound and prussic acid containing an acidic substance as a stabilizer, said prussic acid providing an aqueous phase with pH 5 or less when dissolved at a concentration of 1.5 M in an organic solvent substantially immiscible with water, mixed with pure water at such a ratio that the mixture separates into organic and aqueous phases, and then allowed to stand, wherein said method comprises:

subjecting said prussic acid to a treatment for reducing inhibitory effect of the stabilizer on an enzyme; and

performing an enzyme reaction to synthesize the optically active cyanohydrin using the treated prussic acid.

12. A method for enzymatically producing an optically active cyanohydrin from prussic acid and a carbonyl compound, which comprises:

dissolving prussic acid in an organic solvent substantially immiscible with water to give an organic solution of prussic acid;

adding a buffer to this solution in a saturation amount or more;

mixing;

collecting the organic phase; and

performing an enzyme reaction to synthesize the optically active cyanohydrin using the organic phase as prussic acid.

13. The method according to claim 12, wherein the buffer has buffering ability in a range of pH 4 to pH 7.

14. The method according to claim 11, wherein the enzyme reaction is catalyzed by hydroxynitrile lyase.

15. The method according to claim 12, wherein the enzyme reaction is catalyzed by hydroxynitrile lyase.

16. A method for enzymatically producing an optically active cyanohydrin from prussic acid and a carbonyl compound, which comprises:

performing distillation of a reaction solution after completion of an enzyme reaction to separate and collect unreacted prussic acid and organic solvent therefrom; and

repeatedly using the collected prussic acid and organic solvent at least once.

17. The method according to claim 16, wherein the reaction solution after completion of an enzyme reaction is obtained from the method according to claim 1.

18. The method according to claim 16, wherein the reaction solution after completion of an enzyme reaction is obtained from the method according to claim 5.

19. The method according to claim 16, wherein the reaction solution after completion of an enzyme reaction is obtained from the method according to claim 6.

20. The method according to claim 16, wherein the reaction solution after completion of an enzyme reaction is obtained from the method according to claim 11.

21. The method according to claim 16, wherein the reaction solution after completion of an enzyme reaction is obtained from the method according to claim 12.